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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,630	10/01/2001	Jiang Liang	RD-29301	2277

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GENERAL ELECTRIC COMPANY  
GLOBAL RESEARCH  
PATENT DOCKET RM. BLDG. K1-4A59  
SCHENECTADY, NY 12301-0008

EXAMINER

OLTMANS, ANDREW L

ART UNIT PAPER NUMBER

1742

DATE MAILED: 04/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/662,630

**Applicant(s)**

MIYAZAKI ET AL.

**Examiner**

Andrew L Oltmans

**Art Unit**

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 35-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 35-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1742

## DETAILED ACTION

### *Status of the Claims*

1. Claims 35-58 remain pending in this application. As noted in the Decision mailed July 23, 2003, the petition to withdraw holding of abandonment has been granted. This Office Action is in response to the amendment and 132 declaration filed November 13, 2002. Further, this Office Action is NON-FINAL.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

### *Reinacher et al. 3,622,310*

3. Claims 35-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reinacher et al. 3,622,310 (Reinacher).

Reinacher is applied to the claims for the reasons set forth in paper No. 11, mailed July 13, 2002 in paragraph 4.

### *Reinacher et al. 3,622,310 in view of Selman et al. 3,640,705*

4. Claims 35-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reinacher et al. 3,622,310 (Reinacher) in view of Selman et al. 3,640,705 (Selman).

Art Unit: 1742

Reinacher in view of Selman is applied to the claims for the reasons set forth in paper No. 11, mailed July 13, 2002 in paragraph 5.

*Response to Amendment*

5. The declaration under 37 CFR 1.132 filed November 13, 2003 is insufficient to overcome the rejection of claims 35-58 based upon 35 USC 103 over Reinacher and Reinacher in view of Selman as set forth in the last Office action because:

The declaration of Mr. Melvin R. Jackson fails to provide sufficient evidence of new and unexpected results over the claimed range. The declaration explains at length what is referred to as a "comprehensive experimental program" (see e.g. page 2). The program involves the inputting of property/cost parameters into a software program and achieving a desirability function (see e.g. page 3). The range of alloy compositions that allegedly possess "the critical balance of properties required by next-generation turbine technology", which were derived by the program are shown in Figure B (page 4). Figure B also shows "three compositions outside the critical range" (page 4).

The evidence presented is sufficient for several reasons. First, the applicant is not claiming any of the properties (e.g. Hardness, Modulus, etc...) alleged as new and unexpected (see e.g. independent claims 35, 43, 44, 51, 52, 56, 57 and 58). Therefore, comparisons are merely relative and do not establish what parameters are critical to the claimed invention. Second, the comparison between the compositions inside and outside the "critical range" do not represent a comparison with the closest prior art (i.e.

Art Unit: 1742

Reinacher). Third, the “comprehensive experimental program” is merely a method of optimizing properties to come up with the claimed composition. The declarant notes that Figure A shown on page 3 is “[a]n example of one particular optimization”.

Optimization does not lend patentability to the claims, see MPEP 2144.05 (II):

“Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955)”

In this case, the software package used by the declarant is merely routine experimentation and does not lend patentability to the claims.

Because the claimed compositions are overlapping and the claimed range has not been shown to be critical, the instant claims are obvious.

### ***Response to Arguments***

6. Applicant's arguments filed November 13, 2002 have been fully considered but they are not persuasive.
7. The arguments made by applicant are not persuasive for substantially the same reasons set forth in the explanation of the declaration above in paragraph 5.

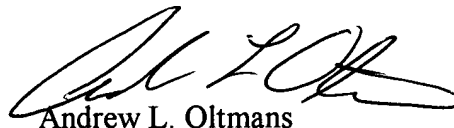
Art Unit: 1742

*Conclusion*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L Oltmans whose telephone number is 571-272-1248. The examiner can normally be reached from 7:00 to 3:30, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Andrew L. Oltmans  
Patent Examiner  
Art Unit 1742

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